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09/404,772	09/24/1999	RANDALL A. HAVNER	99SW087	8769

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JOHN J HORN ESQ
ALLEN BRADLEY COMPANY PATENT DEPT 704P
8TH FLOOR T 29
PO BOX 2086
MILWAUKEE, WI 532019814

EXAMINER

NAHAR, QAMRUN

ART UNIT

PAPER NUMBER

2124

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/404,772

Applicant(s)

HAVNER ET AL.

Examiner

Qamrun Nahar

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-18 have been examined.

Claim Objections

2. Claim 6 is objected to because of the following informalities: the limitation “the library manger” on line 3 of the claim should be “the library manager”. Appropriate correction is required.
3. Claim 10 is objected to because of the following informalities: the limitation “the library manger” on line 3 of the claim should be “the library manager”. Appropriate correction is required.
4. Claim 16 is objected to because of the following informalities: the limitation “the library manger” on lines 11-12 of the claim should be “the library manager”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis (U.S. 5,812,394).

Per Claim 1:

The Lewis patent discloses:

- a library system for creating programs executable on an industrial controller to control an industrial process (“it is a primary object of the present invention to provide a development system for control systems that allows users to define, in an intuitive fashion, the control scheme for a facility by combining the definition of the physical facility with the definition of the logical instructions which comprise the control scheme. ... Still another object of the present invention is to provide a unique and advantageous approach to creating, storing, and maintaining a library of control scheme routines compared to the traditional, manual method.” in column 11, lines 58-63 and column 12, lines 13-16)

- a library manager collecting in unique files, at least first and second program fragments having shared control variables determining physical inputs or outputs exchanged with the industrial process, the shared control variables having common tags (“Referring to FIG. 3, the significance of the internal connection line 130 is evident when examining the definition of the controller device by double clicking on it. The act of drawing connection line 130 between FT-1230 and FIC-1230 caused an internal association of tags between those devices.

Effectively, this dashed line logically linked these two devices. The instrument connection 128 allows the device diagram to expose information about the logical and physical connections of the instrumentation and input/output points of the control I/O hardware. Again, this information

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co-exists on the same diagram that shows the physical facility, illustrating how the symbolic, graphics based approach conveys multiple types of information in a single entity. ... UCOS Device Templates allow engineers to build their library within the control scheme development environment. Additionally, UCOS supplies starter routines for control of typical devices. The power of Device Templating is augmented by the ease with which templates can be applied when building a device diagram. Fig. 13 shows how a user places a pump device on a device diagram by instantiating the definition based on a pump device template object. ... All UCOS devices, when placed (or instantiated) on a device diagram, come from a template. UCOS devices have a template structure which incorporates user-modifiable logic, tag definitions, and graphic symbol dynamics. ... Tag management is one of the primary advantages of UCOS templates compared to manually building a library of routines. Because UCOS templates are an intrinsic part of the Device Diagram and Device Logic development process, the user does not have to perform traditional search and replace editing functions on the inherited logic.” in column 18, lines 26-39; column 27, lines 44-67 to column 28, lines 1-8)

- a first program builder accepting user input to link in a first linking process instances of first program fragments from files in the library manager together to create a first portion of the control program; the first program builder renaming tags of control variables of duplicate instances of first program fragments to be unique (“A device logic developing component defines the logical instructions of the device objects relating to the equipment or control functions. Thus, the development system integrates in a graphical format the physical description of the facility with the logical instructions which define the control scheme for the

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facility. These logical instructions unify the configuration of analog/regulatory control with the configuration of discrete/sequential control. ... Once a template is created, devices based on it can be inserted into device diagrams. The user simply chooses from a toolbar or menu the type of device he/she wants to insert, supplies relevant configuration information, and points in the diagram where that device is to be placed. ... Using object-oriented techniques, UCOS handles all the overhead of making the device unique including making each tag name unique, as is illustrated in the FIG. 14. For example, Pump-1.Running is automatically changed to PMP-1236.Running.” in column 12, lines 52-60 and column 28, lines 26-46)

- a second program builder accepting information about the first liking process, and user input, to create a second portion of the control program from second program fragments taken from the same files of the first program fragments used in the first portion of the control program, the second program builder renaming the tags of the control variables of the second program fragments to comport with the renaming of the tags of the control variables of the first portions by the first program builder; whereby second program fragments can communicate with the multiple instances of the first program fragments through common tags (“The development system includes a device diagramming component for describing a physical description of a facility and a logical definition of a control scheme for the facility. The device diagramming component includes a mode for selecting device symbols representative of equipment or control functions used in facilities. The device symbols are selected from an object-oriented repository containing a plurality of device symbols and device objects. Certain types of device symbols relate to device objects containing logical instructions

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and configuration information relating to the represented equipment or control functions. The device diagramming component also includes a mode for interrelating in a graphical manner the selected device symbols and their corresponding device objects into a device diagram representing the physical description of the facility and the logical definition of the control scheme of the facility. ... FIG. 13 illustrates the type of configuration information that could be supplied for a discrete device upon insertion into a diagram. Note that the user chooses the template on which to base the new device, Pump-1, and specifies the name of the device, PMP-1236. When the user finishes filling out this dialog and clicks OK, he/she has specified all the configured parameters associated with the new device. This might include pages of logic, tag definitions, graphic symbols, and the dynamic behavior of graphic symbols. ... Using object-oriented techniques, UCOS handles all the overhead of making the device unique including making each tag name unique, as is illustrated in the FIG. 14. For example, Pump-1.Running is automatically changed to PMP-1236.Running.” in column 12, lines 36-52 and column 28, lines 31-46).

Per Claim 2:

The Lewis patent discloses:

- wherein the first program fragments provide control logic for industrial control and the second program fragments provide visualization of industrial control (column 12, lines 36-60).

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Per Claim 3:

The Lewis patent discloses:

- wherein the renaming of the first and second program fragments incorporate at least a portion of a name of their unique file of the library manager into the tags of the renamed first and second program fragments (column 28, lines 42-46).

Per Claim 4:

The Lewis patent discloses:

- wherein the library manager holds at least two first program fragments having shared control variables with a second program fragment (column 27, lines 42-52 and column 28, lines 9-22).

Per Claim 5:

The Lewis patent discloses:

- wherein the second program builder accepts user input to select from among the at least two first program fragments, a first program fragment with which the renaming of the tags of the control variable of the second program fragment will comport (column 28, lines 26-46).

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Per Claim 6:

The Lewis patent discloses:

- wherein the second program builder provides at least one menu providing representations of first and second program fragments related to a common file of the library manager and wherein the user input for creating a second portion of the control program selects representations of the program fragments from the menu (column 28, lines 26-67).

Per Claim 7:

The Lewis patent discloses:

- wherein the menu depicts the first program fragments as dependent on particular items of physical equipment of the controlled process (column 28, lines 35-39).

Per Claim 8:

The Lewis patent discloses:

- wherein the library manager holds at least two second program fragments having shared control variables with a first program fragment (column 27, lines 42-52 and column 28, lines 9-22).

Per Claim 9:

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The Lewis patent discloses:

- wherein the second program builder accepts user input to select from among the two second program fragments, a second program fragment with which the renaming of the tags of the control variables of the second program fragment to a first program fragment will comport (column 28, lines 26-46).

Per Claim 10:

The Lewis patent discloses:

- wherein the second program builder provides at least one menu providing representations of first and second program fragments related to a common files of the library manager and wherein the user input for creating a second portion of the control program selects representations of the program fragments from the menu (column 28, lines 26-67).

Per Claim 11:

The Lewis patent discloses:

- wherein the menu depicts the first program fragments as dependent on particular items of physical equipment of the controlled process (column 28, lines 35-39).

Per Claim 12:

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The Lewis patent discloses:

- wherein the files of the library manager denote phases of operation of a machine of the controlled process and wherein the files also include information related to the phase of operation denoted by the file but not a program fragment (column 27, lines 42-52 and column 28, lines 26-39).

Per Claim 13:

The Lewis patent discloses:

- wherein the first program fragments written in a language selected from the group consisting of: function block language, structured text language, ladder logic language and sequential function chart language (column 22, lines 1-19).

Per Claim 14:

The Lewis patent discloses:

- wherein the renaming is performed by concatenating a unique identifier onto the tag of the control variable (column 28, lines 42-46).

Per Claim 15:

The Lewis patent discloses:

- wherein the files of the library manager are identified to equipment of the controlled process (column 27, lines 42-47).

Per Claim 16:

This is another version of the claimed library system discussed above, claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above, including “identifying the files of the library manager from which the instances of the first program fragments originated to display to a user second program fragments related to each instance of the first program fragments according to common library files” (column 28, lines 26-46), and “accepting user input to select among the displayed second program fragments” (column 28, lines 47-56), and “common tags are identified and utilized” (column 28, lines 42-56). Thus, accordingly, this claim is also anticipated by Lewis.

Per Claim 17:

This is another version of the claimed library system discussed above, claim 2, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Lewis.

Per Claim 18:

The Lewis patent discloses:

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- wherein the renaming of the first and second program fragments incorporate a common name of their unique file of the library manager (column 28, lines 42-46).

Conclusion


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication from the examiner should be directed to Qamrun Nahar whose telephone number is (703) 305-7699. The examiner can normally be reached on Mondays through Thursdays from 9:00 AM to 6:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone number for the organization where this application or processing is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

QN
May 29, 2003


KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100